

'Sherman'

big bluegrass

Poa secunda (J. Presl)



Figure 1. Sherman big bluegrass seed production field at the Pullman Plant Materials Center.

'Sherman' big bluegrass (*Poa secunda* J.) is a cultivar released in 1945 in cooperation with Agricultural Experimental Stations located at Pullman, Washington; Moscow, Idaho; and Corvallis, Oregon.

Description

Sherman big bluegrass is a long-lived, cool-season perennial bunchgrass with a large, compact, erect seed head. It has fine, smooth and straight stems that attain a height of 18 to 35 inches. Leaves are a distinct blue color and moderately abundant, ranging between 8-14 inches long. It heads early and produces abundant seed. Seed is 3/16th of an inch long with no awns present. Seed shatters readily and grows with the first fall rains. Sherman establishes moderately easy and begins growth very early in the spring, as much as 4 weeks earlier than crested wheatgrass (*Agropyron cristatum*), and its palatable forage is ready for grazing 4 weeks earlier than crested wheatgrass. Plants have an abundant deep root system as well as, extensive shallow roots. Sherman becomes dormant during the hot summer and recovery is good with cool weather and fall rains.

Source

Seed was collected from native vegetation near Grass Valley, in Sherman County, Oregon, by D.E. Stephens, superintendent of the Sherman Branch Experiment Station, in 1932 and was recollected by the Pullman Plant Materials Center in

1935. Compared to a collection of 60 other big bluegrasses from the dryland areas of Washington, Oregon and Idaho, Sherman was selected for early spring growth, high seed production and abundant forage production. Aberrant types were removed after several generations of recurrent selection from a highly apomictic population.

Conservation Uses

Sherman big bluegrass is primarily used for reseeding rangeland, revegetation of disturbed lands for critical area stabilization and mine soil reclamation, cropland retirement, development of upland wildlife habitat, and dryland hay production. In annual cropping wheat areas and areas where only one crop of alfalfa hay is grown due to water shortage, Sherman could be used in mixtures with alfalfa for hay. Biomass production of Sherman varies with rainfall and irrigation. Sites that receive 11 inches of annual rainfall can yield 700-1,500 pounds per acre. Irrigated production can be as high as 2 tons per acre. In range plantings, early spring grazing by cattle and sheep is a primary use of big bluegrass seedings. Sherman is one of the earliest growing big bluegrasses and is highly palatable to cattle. Sherman also makes excellent standing forage for fall and winter months. Roadside plantings are effective at suppressing weed? seed growth in central Washington.

Area of Adaptation and Use

Sherman is adapted to the native range of big bluegrass in the Pacific Northwest and Great Basin states at elevations of 300 to 8000 feet on well-drained sites that receive 9-20 inches of annual rainfall. It can be successfully used in the lower Columbia Basin where winters are mild and receive as little as 6 inches of annual rainfall, however, forage production will be reduced. It performs better than 'Service' big bluegrass in the inland Pacific Northwest. Established stands recruit readily from shattered seed and may improve over time. Late summer fires have had little adverse impact on Sherman in Conservation Reserve Program burn studies conducted in central Washington. It should not be seeded to alkali flats or densely forested areas. Sherman tolerates moderately acidic soil conditions and performs well for reclaiming hard rock mine spoils.

Establishment and Management for Conservation Plantings

Sherman can be seeded alone or with other grasses such as Idaho fescue, bluebunch wheatgrass, Snake River wheatgrass, and basin wildrye. It can also be sown with forbs and legumes, such as in a mixture with alfalfa on dryland sites where one crop of hay can be harvested annually. There are approximately 926,000 seeds per pound. When seeded alone, use a rate of 2-4 pure live seed (PLS) pounds per acre. If broadcast seeding, increase the seeding rate 1.5 times.

For establishment in wheat-summer fallow areas and on adjacent rangelands, Sherman should be seeded on coarse textured soils in areas of less than 15 inches of annual rainfall during the early fall into a firm seed bed, free of weeds and other vegetation. Drill seed no more than $\frac{3}{4}$ of an inch deep on rows of 36 inches. Do not harrow or pack after drilling. In burned-over areas, broadcast seed in fall or over winter snow. On roadsides and where drilling is not possible, follow broadcast seeding with a harrow or brush drag. Mulching is beneficial. In a mix with alfalfa, plant at 2 PLS pounds per acre. Fertilize at a rate of 20-40 pounds of nitrogen per acre on low fertility sites. Protect new seedlings for one full season from livestock. The seedlings roots are not well established and are easily pulled out of the ground by stock.

Cheatgrass is the most troublesome weed during establishment of Sherman yet, once established Sherman competes well with cheatgrass. Annual broadleaf weeds such as prickly lettuce and Russian thistle are less of a problem during the establishment of Sherman. Perennial broadleaf weeds such as Canadian thistle and leafy spurge must be controlled because they will severely impact Sherman.

Ecological Considerations

Sherman like other big bluegrass, is subject to rust when epidemics occur. However, epidemics seldom occur in low rainfall areas. Sherman shows little damage from other grass diseases. Sherman is a native species and has no known impacts on wild or domestic animals. It can spread to adjoining vegetative communities under ideal conditions.

Seed and Plant Production

Sherman seed yields are generally highest the third season; however, with proper management, high yields can be maintained for up to six years. It will produce on depleted soils; however, seed yields will be less than on better, more fertile sites. At Pullman, Sherman big bluegrass has yielded as much as 500 to 800 pounds of clean seed per acre. Sherman cures well and seed can be harvested by combining directly from the field.

Availability

For conservation use: Sherman big bluegrass is widely available from the commercial seed market.

For seed or plant increase: Breeder seed is maintained by the Pullman Plant Materials Center.

Citation

Release Brochure for Sherman big bluegrass (*Poa secunda*). 2021. USDA-Natural Resources Conservation Service, Pullman Plant Materials Center. Pullman, WA.

For additional information about this and other plants, please contact your local USDA Service Center, NRCS field office, or Conservation District <<http://www.nrcs.usda.gov/>>, and visit the PLANTS Web site <<http://plants.usda.gov/>> or the Plant Materials Program Web site <<http://www.plant-materials.nrcs.usda.gov/>>



Figure 2. Sherman big bluegrass in a field planting.

For more information, contact:
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